

Faunal diversity of Phâwngpui National Park, Mizoram (Phâwngpui tlâng tlawh report)

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THU LAIMU

Phâwngpui National Park tlawhin ni hnih chhûng a hmunah nungcha chi hrang te zirin November 2009 khân mi 13 kan kal a. Kalkawnga kan nungcha hmuh leh man te nêh uluk taka zirchian an ni a. Arthropod chi hrang 19, annelid 5, amphibian 1, reptile 3, bird 26 leh mammal 6 kan chhinchhiah a. PNP hi humhalh a nih avângin nungchate tân chênna hmun tha tak a ni a. Khâm leh ruamrai leh awihtlân te, phûl leh ngaw te nen tlâng sâng leh kawr ruam bâkah luipuiin a hual avângin nungcha te pialrâl a ni ber e. Nungcha chi hrang hrang awm te hi chianguang zâwka la zir chian zêl an nih theih nan he park hi uluk taka enkawl leh vênhim a tûl hle.

Thumal inghahna bikte: Nungcha; Phâwngpui National park; chihrang (species); chênna.

THUHMAHRUAI

Mizoram hi India hmârchhak kil, 21°56'N leh 24°31'N latitude, 92°16'E leh 93°26'E longitude inkâr a awm a ni a. India hmârchhak hi thilnung chi hrang hrang tam bikna hmun (biodiversity hotspot) pakhat a ni ve a. Chutih lai chuan ramvahtsapêl avâng te, ram kâng, tûra hrai leh mihring hnuhma dang dang avânga an chênna (habitat) an hloh zêl avângin Mizorama thilnung chi hrang hrang te chu an chereu tan mêk a. Humhim leh humhalh an ngai tak meuh meuh a ni. Chuvâng chuan heng kan nungcha riral zêl tûr vêng tûr leh eng chen chiaha dinhmun râlti nge an nih hre tûrin mumal taka zir chianna (systematic study) neih vat hi thil tûl hmanhmawhthlâk tak a ni. Zirbing mi te leh sorkar pawhin helamah hian kut kan thlâk a hun

hle tawh a ni.

Phâwngpui National Park-ah hian a enkawltu Forest Department lamin an târlan dânin he National Park chhûnga ramsa chi hrang hrang leh sava bâkah naubân chi hrang tam tak te chu a tihlutu an ni a. Ramsa langsâr deuh te chu sathâr (goral), saza (serrow), sakhi (barking deer), sazuk (sambar), keite (leopard), savawm (Himalayan black bear), hauhûk (hoolock gibbon), ngau (common langur), zâwng (rhesus macaque), zâwng mawt (stump tail macaque), vangâ (Blyth's tragopan), vahrit (Kalij pheasant), penglêng dum (dark-backed swift) te an ni a. Mizoram state bird vavu (Hume's pheasant) pawh awmin an sawi a. Tin, ramsial (Indian bison) pawhin a khât tâwkin a tlawh thin thu an sawi (Pu Vana *in litt.*).

B.Sc (Zoology) zirlai te hian class room-ah a thuin nasa takin nungcha chanchin an zir a. Practical class-ah tam tak tizui leh mah se nungchate an chênna hmuna han zirchian hi an tân a tûl ve avângin Mizoram University hnuiaia a III

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yr B.Sc (Zoology) zirlai ah field visit hi telh a ni a. Field visit an neih hi zoology an zirna a taka an luhchilh leh zual nan leh zirbingna lamah an rilru chawhphur a nih theih nan thil ƚangkai tak a nih dawn avângin heng te tihlawhtling tûr hian November 17-21, 2009 chhûng khân Pachhûnga University College a zirlai 10, technician 2 leh zirtirtu 1 te chuan Phâwngpui National Park hi kan va tlawh a ni. Mizoram pawn lam mi leh a enkawltu department te chuan PNP-a ramsa leh sava bâkah nungcha dang awm te chu lo târlang nel nual tawh mah se a ram neitu zir-laite ngeiin zirchianna mumal tak kan la neih loh vângin heng a hnuai mite tum chung hian kan tlawh a ni.

1. PNP-ah nungcha eng te nge awm?
2. PNP ram hmunhma, leilung leh thing leh mau te nen eng ang taka nungchate chenna atâna a ƚha nge hriat.
3. Zirlaiten an zirlai a taka luhchilh puia an zir zêlna lama phûrna siamsak.

A HMUNHMA LEH ZIR DÂN

Phâwngpui tâng (Blue Mountain), Phâwngpui National Park (PNP) (22°39'N and 93°02'E) an tih tak hi Mizoram chhim chhak lam, Myanmar ramri hrûla Chhimtuipui (Kolodyne river) kama awm a ni a. A zau zâwng chu 50 km bial a ni. Chhimtuipui hi PNP chhak lama luangin Myanmar leh India inri-na a ni a. A tâng sang lai ber (Phâwngpui Peak) hi 2157 m niin Mizorama tâng sâng ber a ni. He National Park hi sub-tropical broadleaf leh tropical evergreen forests an tih ang hian a khuh hring dup mai a. Hmuh a nuamin a thlamuanthlâk a, thil nung chi hrang pawh an tam (biodiversity rich) hmêl fu a. A sâng lai erawh a vawh deuh bâkah thli a tam avângin nungcha (animal) lam chu a reh deuh a. Thing awm te pawh lian leh sâng tak tak ni lovin thliin a nuai reng tih hriat takin an chang fâk mai a, samin a bawh hnehin han thlah hnuang mai te pawh an awm. Chutih laiin a ruam deuh leh ngaw un pui pui mai te chu nungcha tinreng te tân hmun ƚha a ni tih hriat takin an hnuhna a tam hle a. Hmun sâng leh vawta awm chi thingte chu ramsa leh sava tlan tûr a awm

vak loh laiin a hmun hniam leh Chhimtuipui kam bâwr vêlah chuan rahtlân a ƚha khat hlein an sawi.

Nungcha a tê ber aƚanga a lian ber thlengin, lei chung leh boruak bâkah tui chhûng amite pawh kan theih ang ang kan lakhâwm a, kan man theih lohte pawh a awm dân pianzia leh hmâlhmangte ziaka chhinchhiahin an thla te kan la a. Thlalâk nan hian Olympus Digital camera (SP-500) leh (SP-350) kan hmang a. Nungcha tê deuh thlâwk chi leh kat rang deuh deuh chi man nan insect net kan hmang. Lei ami man nan tuthlawh (hand hoe) leh tuƚhulh te, chemtê leh hmanraw remchâng apiang hman a ni a. Kan lâkkhâwm theih te chu 5% formalin-ah dahin laboratory a zir chian tûrin specimen bottle-ah dah ƚhat nghâl zêl a ni. Kan man tirhin chhinchhiah ngai piang note bu-ah chhinchhiah zêl a ni.

Sava leh ramsa lian deuh ho chu an thlalâk te, a hnu-kehniak leh hnuhna dang te, an hrâm ri leh an rawng bâkah an êk aƚang te a thliar leh hriat (identify) an ni a. Sava identify nan hian Salim Ali and Dillon Ripley te lehkhabu 'A *Pictorial Guide to the Birds of the Indian Subcontinent*' hman a ni a.¹³ Arthropods ho identify nan Hickman, Roberts & Larson (*Animal Diversity*),¹ R.L. Kotpal (*Modern text Book of Zoology: Invertebrates*),⁶ E.L. Jordan and P.S. Verma (*Invertebrates*)⁴ leh Howard E. Evans (*Insect biology*)³ te behchhan a ni. Reptiles leh amphibians identification-ah hian H.T. Lalrem-sanga paper te rawn a ni a.^{9,10} Mammals-ah hian S.H. Prater lehkhabu 'The *Book of Indian Animals*' hmangin,¹² Mizo hming nêh a vuah rem nan M. Sawmliana (*Foresters Field Guide*)¹⁴ leh A.C. Zonunmawia and Navraj Prabhan (*Mizoram and its Wildlife (Checklist of Mammal, Amphibian, Reptile, Bird, Fish, Invertebrate Fauna & Flora)*)¹⁶ te hman a ni a. Heng bakah hian pasalƚha leh rual û te be râwnin lehkhabu dang leh internet lam aƚangin a puitu thlalâk leh thuziak tam tak en tel a ni bawk.

HMUHCHHUAH LEH SAWI ZUINA

Kan zirna aƚanga kan nungcha hmuh te hi hnungzâng ruh nei lo (invertebrate) leh hnung-

zâng ruh nei (vertebrate)-ah kan then a (Table 1-5). Rannung tê chi ho-ah hian taksa bung hrang inzawmkhâwm chi (segmented body) phylum Annelida zing ami changpât (earthworm, Oligochaeta) chi thum - *Perionyx excavatus*, *Drawida* sp. leh la hriatchian loh pakhat bâkah vangvat (leech, Hirudinae) chi hnih, vangvat phâr leh vangvat seĩtial kan chhinchhiah thei a. Phylum Arthropoda ațangin chi hrang 19 kan chhinchhiah a. Chung zinga 16 te chu class Insecta an ni a, 1 chu Arachnida, 1 chu Crustacea leh a dang 1 chu Chilopoda class amite an ni. Insect ho hi order chi hrang 8 lai amite anni hlawm.

Tui leh khawmuala chêng kawp chi, amphibian pakhat uchang (toad, *Microhyla dertmorei*) kan hmu a. Tin, vuna puhlip nei chi, reptile pathum kan hmu a, chung te chu rultuha (spotted pit viper) *Trimeresurus erythrurus* (suborder Serpentes) leh laiking te chi (suborder Lacertilia) leh laiking hnung tial (white striped lizard, suborder Lacertilia) te an ni. Boruak lama chêng chi sava (aves) chi hrang 26 kan chhinchhiah theih te hi chhûngkua (family) 15 amite an ni.

Hun thâwl zâwkah khua chhiain a bawhbuai hauh lova zir chu ni la, hei aia tam fe hi kan chhinchhiah ngei ang. Vânduaitlâk taka kan tlâng lâwn nia zing ațanga zân thleng ruah sûr char char mai kara Far Pak rest house ațanga Phâwngpui tlâng sâng lai ber kawng sât chawp lehngâla kan lâwnchhuah dân hahthlâk leh hrehawmzia, a chhinchhiah tlâk si ziate chu sawi zau lo mai ila. Kan zirlai te erawh kan fak thlâwt a. Phâwngpui tlâng sâng lai ber kan thlen a chaw ei tûr pawh la fuh thei lo khawpa khaw wawtin kut a hmeh khawng te kha Aizâwl khawpui nula leh tlangvâl nia mawi lovin an tu-archhelin an huaisen a ni. Favâng mah ni se ngawpui hnuaiah chuan ruahsûr vâng nge ni vangvat an lo la tam hle a, thomitchhah lah duhthusamin an tam.

Mizoram a kan ramsa, sava leh sangha te hi tualchhûng mi ten mumal taka zirna leh ziahna kan la nei lo hi a pawl a. Ram pawns lam ațang chuan record kahpah tak tak hmuh tûr a awm nil nial a. Heng te pawh hi a hmunarawn zir tak

tak an ni em tih zawhna rilru-ah a awm thin. Nungcha tê chite hi record kan nei tha taw lo hle a. Zoological Survey of India chuan arthropods 652 record tawhin heng zinga 541 te chu insect an ni.¹⁷ H. Lalthanzara (2010) chuan changpat (earthworm) chi hrang 20 chuang a chhinchhiah tawh thu leh chung zinga pakhat chu a chi thar (new species) niin a hmingah pawh Mizoram hming chawiin *Eutyphius mizoramensis* a nih thu a târlang a⁸ (tûnah hian specimen identify tûr 40 vel a kawl mêk baw). Thosi (mosquito) chi hrang 19 a awm tih finfiah a ni tawh baw a (Vanramliana 2010, *in litt.*). Lalrotluanga *et al.* (2008) te chuan phengphehlep ringawt chi hrang 87 lai a awm thu an târlang tawh baw.¹¹

Uchang pakhat chauh kan hmu nawlh mai hi kan kal hun khawro hun lai a nih vâng leh lui-kam vêlah chawlhna hun kan neih loh vang a ni thei. H.T. Lalremsanga (2010) chuan amphibian chi hrang 40 chuang vêl an chhinchhiah tawh a, chung zinga pakhat chu new species niin a hming ah pawh *Leptolalax tamdil* (Tamdil hming chawiin) an vuah thu leh reptile lamah laiking chi hrang 15 chuang leh rûl chi hrang 50 vel a record tawh thu leh tûnah pawh specimen lâkkhâwm sa identify tûr engemaw zât a kaw lo thu leh hun rei vak lovah hei aia tam hi report tûr a neih ngei tûr thu a sawi (*in litt.*). Kan laiking va man pahnihte hi kan identify thei lova, tlâng sâng hmun vawta awm an nih avâng nge ni an tê khawp mai lehngâla a, an che pawh a muang fu mai. ZSI chuan amphibian chi hrang 13 leh reptilian chi hrang 71 Mizoram atangin an record tawh thung¹⁷.

Sava chhûngkua (family) 15 hnuaia chi hrang 26 kan va chhinchhiah te hi kan hmuh leh an hram ațanga kan hriat te an ni a. Duh anga khua a thian that loh avângin kan hmuh chian theih lohte pawh an awm nual. Tin, thlalâkna tha chungchuan deuh hlek hmang lo chuan an rawng dik tak hmu tûrin ni thlârah thla a lâk theih loh a, han tihlum chiam chu a chi der si loh. Lalram Thanga (2006) chuan Phâwngpui National Park-ah hian sava chi hrang 125 vêl awmin a târlang a.* Ghose (1999) erawh chuan sava chi hrang 108 a report a, chung zinga 3 chu

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Table 1. Arthropods (Invertebrate)

Sl. No.	Mizo Name	Common name	Scientific name/Order:family
1.	Khau	Grasshoppers*	<i>Schistocerca</i> sp. (order- Orthoptera)
2.	Armawnghawlh	Stick Insect	<i>Carausius</i> sp. (Order- Orthoptera: Phasmida)
3.	Phengpnehlep1	Butterfly 1	(Order- Lepidoptera)
4.	Phengpnehlep2	Butterfly 2	(Order- Lepidoptera)
5.	Daidep sen	Red Dragon fly	(Order- Odonata, suborder- Anisoptera)
6.	Fanghmir1	Ants1	(order- Isoptera:Formicidae)
7.	Fanghmir2	Ants2	(order- Isoptera:Formicidae)
8.	Fanghmir3	Ants3	(order- Isoptera:Formicidae)
9.	Khawichhur-I	wasps (Bumble Bee)	<i>Bombus</i> sp.(Order- Hymenoptera: Apidae)
10.	Khawichhur-II	wasps (Bumble Bee)	<i>Bombus</i> sp.(Order- Hymenoptera: Apidae)
11.	Khuai	Scolioid wasps	(Order- Hymenoptera:Scolioidea)
12.	Khuangbai	Field Crickets	<i>Gryllus</i> sp. (Order- Orthoptera:Ensifera)
13.	Thereng	Cicada	<i>Tibicen</i> sp. (Order Hemiptera: Cicadidae)
14.	Beetle	Tiger Beetle	(Order- Coleoptera:Cicindelidae)
15.	Thlangdar sen	Two spotted Stink bugs	<i>Perillus</i> sp. (Order- Hemiptera:Pentatomidae)
16.	Tuitifimi nu	Water striders	<i>Gerris</i> sp. (Order- Hemiptera: Gerridae)
17.	Tit	Centipede	<i>Scolopendra</i> sp. (Order- Scolopendromorpha) Chilopoda
18.	Maimawm	Spider1	(Order- Araneae, Class Arachnida)
19.	Maimawm	Spider2	(Order- Araneae, Class Arachnida)
20.	Chakai	Land Crab	(Order: Decapoda, Class Crustacea)

Table 2. Annelids (Invertebrate)

Sl. No.	Mizo Name	Common name	Scientific name/Order:family
1.	Changpat/pangchat	Earthworm (Indian blue)	<i>Perionyx excavates</i> Megascolecidae)
2.	Changpat var te	Earthworm	<i>Drawida</i> sp. (Oligocheta: Miniligastridae)
3.	Changpat	Earthworm	(Oligochaeta)
4.	Vangvat seilial	Leech	<i>Hirudo medicinalis</i> (Gnathobdellida: Hirudinae)
5.	Vangvat phar	Leech	<i>Hirudo</i> sp. (Order: Gnathobdellida: Hirudinae)

Table 3. Amphibian & Reptiles (Vertebrates)

Sl. No.	Mizo Name	Common name	Scientific name/Order:family
1.	Uchang	Toad	<i>Microhyla dertmorei</i> [Order- Anura(Procoela)] (TPR)
2.	Rul tuha	Spot-tailed Pit Viper	<i>Trimeresurus erythrurus</i> (Suborder Serpentes) RS
3.	Laiking te	Small lizard	(Suborder Lacertilia) NPS
4.	Laiking hnung tial	White striped Lizard	(Suborder Lacertilia) RS

Table 4. Birds (Vertebrates)

Sl. No	Mizo name	English name	Scientific name	Family	Mode of identification	Place of record
1.	Chedede	Blacknecked Tailor Bird	<i>Orthotomus atrogularis</i>	Cisticollidae	Singing	PNP
2.	Tektek/Tiktik	Plain coloured Flowerpecker	<i>Dicaem concolor</i>	Dicaeidae	Sighted	PNP

3.	Lailen	White Wagtail	<i>Motacilla alba dikhunesis</i>	Motacillidae	Sighted	PNP
4.	Lailen (awr dum)	White Wagtail	<i>Motacilla alba personata</i>	Motacillidae	Sighted	RS
5.	Chipte	Pipit	<i>Anthus sp.</i>	Motacillidae	Sighted	PNP
6.	Ramchippui	Richards Pipit	<i>Anthus sp.</i>	Motacillidae	Sighted	PNP
7.	Vamur/Pengleng	Asian Palm swift	<i>Cypsiurus balasinensis</i>	Apodidae	Sighted	Nr Tuichang
8.	Bawng	Small Minivet	<i>Pericrocotus cinnamomeus</i>	Campephagidae	Sighted	PNP
9.	Phawngphawdawtdawt	Collared Pigmy Owlet	<i>Glaucidium brodiei</i>	Strigidae	Singing	PNP
10.	Mu	Hawk-Eagle	<i>Spizaetus cirrhatus limnaeetus</i>	Accipitridae	Sighted	PNP
11.	Mute	Car Nicobar Shikra	<i>Accipiter badius butleri</i>	Accipitridae	Sighted	RS
12.	Tawllawt	Great Hill Barbet	<i>Megalaima virens</i>	Capatonidae	Singing	PNP
13.	Ramparva	Emerald Dove	<i>Chalcophaps indica</i>	Columbidae	Sighted	PNP
14.	Thumi	Bartailed Cuckoo Dove	<i>Macropygia unchall</i>	Columbidae	Sighted	On the Road
15.	Chhawhring	Golden fronted Chloropsis or Leaf Birds	<i>Chloropsis aurifrons</i>	Irenidae	Sighted	PNP
16.	Chhawhring awmeng	Orange bellied Chloropsis or Leaf Bird	<i>Chloropsis hardwickii</i>	Irenidae	Sighted	PNP
17.	Tlaiberh	Red vented Bulbul	<i>Pycnonotus cafer</i>	Pycnonotidae	Sighted	PNP
18.	Phai Tlaiberh	Bulbul	<i>Pycnonotus sp.</i>	Pycnonotidae	Sighted	RS
19.	Vangek	Black Bulbul	<i>Hypsipetes madagascariensis</i>	Pycnonotidae	Singing	PNP
20.	Chhemhur (awmvar)	Black headed shrike	<i>Lanius schach tricolor</i>	Laniidae	Sighted	PNP
21.	Chhemhur(hnung paw)	Grey-backed shrike	<i>Lanius tephronotus</i>	Laniidae	Sighted	PNP
22.	Chhemhur (ludum)	Blackheaded Shrike/Long-tailed Shrike	<i>Lanius schach tricolor</i>	Laniidae	Sighted	RS
23.	Changarh	White spotted Fantail Flycatcher	<i>Rhipidura albicollis albogularis</i>	Muscicapinae	Sighted	PNP
24.	Koro lupar	White Crested Laughing Thrush	<i>Carrulax leucolophus</i>	Muscicapinae	Singing	PNP
25.	Chinrangte	Little Forktail	<i>Enicurus scouleri</i>	Tûrnidae	Sighted	RS
26.	Vahlah	Mountain Bamboo Partridge	<i>Bambusicola fytchii</i>	Phasianidae	Singing	PNP

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Table 5. Mammals (Vertebrates)

Sl. No.	Mizo name	English name	Scientific name	Mode of identification	Family	Place of record
1.	Thehleikapsen	Red-bellied Palla's Squirrel	<i>Callosciurus erythraeus</i>	Sighted	Sciuridae	PNP
2.	Thehleimualrang	Himalayan striped Squirrel	<i>Callosciurus maclellandi</i>	Sighted	Sciuridae	PNP
3.	Saza	Serow	<i>Naemorhedus (=Capricornis) sumatraensis</i>	Fresh Stool	Bovidae	PNP
4.	Ramsial/Sele	Indian Bison	<i>Bos gaurus</i>	Foot prints	Bovidae	PNP
5.	Sanghal	Wild Board	<i>Sus scrofa cristatus</i>	Foot prints	Suidae	PNP
6.	Tlumtherh	Lesser Indian Civet	<i>Viverricula indica</i>	Dead body found	Viverridae	RS

PNP, Phâwngpui National Park; RS, road side ; TPR, Tuipui river



The team at Forest Rest House, Far Pak, Phâwngpui Tlang



The team leaving Forest Rest House, Far Pak for home



Tlumtherh (Lesser Indian Civet)



Lizard found at Far Pak



Grasshopper with an X mark on its dorsal side

riral mai hlauhawm (near threatened) an nih thu a sawi.² Sumit Sen (2005) chuan Dampa Tiger Reserve-ah sava chi hrang 92 a awm thu a târlan[†] laiin Shankar Raman *et al.* (1998) te chuan 138 an report ve thung.¹⁵ Tin, Bombay Natural History Society (BNHS) – Environment Information system (ENVIS) chuan Mizoramah sava chi hrang 322 te hming an târlang a.[†] Choudhury erawh chuan sava chi hrang 479 a awm thu a târlang thung[‡]. ZSI lam chuan family 59 hnuai ah sava chi hrang 370 a awm thu an târlang¹⁷.

PNP chhûngah tak hian lui tih tham a luan tlang loh avângin sangha lam kan va hmu lova. Sangha lam chhinchhiah mumal deuh te zingah Mizo kuthnu a la lang lo. Kar & Sen (2007) te hian Mizoram lui 8 an zirna aţangin chi hrang 102 a awm tih an hre thei a, heng zinga 6 te chu dinmun derthâwng (threatened) zingah an tel

thu târlan tel a ni.⁵ Lalramliana (2010) chuan survey a neih tawh chinah sangha chi hrang hi report awm sa ai hian a tam ngei ang a tih a sawi (*in litt.*). Environment and Forest Department, Government of Mizoram (2010)[†] a târlan dânin Mizoramah mammals chi hrang 53 a awm. Lalnuntluanga (2006) chuan PNP-ah mammal lar deuh 11 a ziaak lang.⁷

Hetih lai hian Zoological Survey of India, Kolkatta chuan heng aia tam emaw a tlêm lam emaw hi record an nei tawh hlawm a. Anni report hi chu râlkhat aţanga thil ti an ni a, academician-te rin a phur lutuk lo, mahse India sorkar rin ber pakhat chu an ni lawi si. Eng pawh ni se, ramsa zirna lamah hian Mizo thalaite tân kâwl a êng tha hle a, hnam dang zirlai viak tha tak ten min zir khalh hmaa kan thawh ve thuai thuai a hun ta hle mai.

HARSATNA

Thing leh mau leh hnim chi hrang hrang taxonomic identification-ah chuan a Mizo hming ten hna engemaw chen thawh a ni tawh a. Ramsa, sava, sangha leh nungcha dangte an Mizo hming nêh mumal taka taxonomic identification erawh chu hna la thawh mumal a awm lo. A awm chhun te chu M. Sawmliana leh A.C. Zonunmawia & Navraj Prabhan te kuthnu hi a ni mai a. An ni hi zoology zirna bêla chhum hmin an nih leh nih loh ka hre lo nâ-in an kut hnu aţang chuan zoologist an ang lem lo. Chuti chungah thahnem ngai taka hetiang an buatsaih thei hi an fakawm khawp mai, a sũlsutu chu an ni reng reng. Amaherawhchu heng an thuziakte pawh hi ennawn ngai a awm nual thung. Chuvâng chuan ramsa te Mizo hming leh an science hming (scientific name) vuah rem hi a harsa lai tak chu a ni.

RAWTNA

1. PNP hi ngungchate pialrâla siam tûrin tun aia nasa zâwkin a enkawltu department-in hma la se. Tin, a chhehvêla chêngte pawhin tha takin thlâwp thei se. A chhehvêla chêngte leh a enkawltute tha takin thawkho se. PNP him zâwkin nan khauh zâwkin dân lekkawh ni se.

2. Zirbing mite leh a tui miten ramsa an lâkkhâwm sa te rawn kengin emaw, an thlalâk a tha thei ang berin rawn lakhâwm sela, an Mizo hmingte hre dik thei tûrin ramchhuak mi rual û deuhte sâwmkhâwmin ni 3t4 aw h tûr state level workshop on taxonomic identification of wild animals tih lam hawi hming puin buatsaih ni se. Hemi organise tûr hian Mizoram University leh E&F Department-ten pui tham takin huaihawt se. College hrang hranga zoology zirtirtute bakah tualchhông mithiamte leh ram pawn lam aţanga mithiamte sâwm bawkin hun hman ni se. MIPOGRASS pawhin hma la se.

PUIHNA KAN DAWN

Phâwngpui National Park kan tlawh theih nana sum min petu Dr. Tawnenga, Principal,

Pachhûnga University College leh kawng hrang hranga min puitu Dr. K. Lalchhandama, Head, Department of Zoology, PUC, te chungah lawmthu kan sawi a. Kan zirlai fel leh taima tak tak, specimen lâkkhâwmnaa theihtâwp chhuah-tute chungah lâwmthu kan sawi bawk. Tin, Pu L.R. Thanga, IFS, Chief Wildlife Warden, PNP tlawh phalna min petu leh literature min hman-tirtu bâkah DFO, Lawngtlai leh field staff of the E & F Department, Govt. of Mizoram ten kawng hrang hranga min puih avângin an chungah kan lâwm em em a ni.

THUZIAK RAWN TE

1. Cleveland P. Hickman Jr., Larry S. Roberts & Allan Larson (2002). *Animal Diversity*, Tata McGraw Hill Companies, pp 1-447.
2. Ghose D (1999). Birds recorded at Blue Mountain (Phâwngpui) National Park, Mizoram Between February - May, 1997. *Twilight* 1(5), 16-18.
3. Howard E Evans (1984). *Insect Biology*. Addison-Wesley Publishing Company, pp 1-436.
4. Jordan E.L and Verma P.S (2009). *Invertebrates Zoology* 14th Ed. S. Chand Company, New Delhi. pp. 1-1127.
5. Kar D & Sen N (2007). Fish diversity of Mizoram, Tripura and Barak drainage. *Zoos' Print Journal* 22(3), 2599-2607.
6. Kotpal R.L (2006). *Modern Text Book of Zoology: Invertebrates* 9th Ed. Rastogi Publications, Meerut. pp 1-64.
7. Lalnunluanga (2006). Phâwngpui National Park (Blue Mountain). *Sci Vis* 6(3), 64-66.
8. Lalthanzara H (2010). Studies on diversity of earthworms in Mizoram. (Unpublished)
9. Lalremsanga H.T. et al. (2009). Collections on the Saurian (Teptilia: Squamata) fauna around Aizawl city area with notes on their ecology. *Sci Vis*, 9(2), 57-72.
10. Lalremsanga H.T. et al. (2008). Snakes (Reptilia: Serpentes) of Mizoram University Campus, Tanhril, Aizawl with Notes on their Identification Keys. *Sci Vis*, 8(4), 112-127.
11. Lalrotluanga, Isaac Laldikbera, Catherine Vanlalruati, Zothansanga, Brindha S, Senthil Kumar N & Gurusubramanian G (2008). Butterfly Faunal Diversity in Aizawl, Mizoram, India. *Sci Vis*, 8(3), 65-75.
12. Prater S.H. (1991). *The book of Indian Animals*, Bombay Natural History Society, Mumbai, pp 1-324.
13. Salim Ali & Dillion Ripley D (1983). *A Pictorial Guide to the Birds of the Indian Subcontinent*, Bombay Natural History Society. Delhi, pp 1-177.

14. Sawmliana M (2009). *Foresters FIELD GUIDE*, 2nd Ed. P. Zakhuma, Aizawl, pp 1-221.
15. Shankar Raman T.R., Rawat G.S. & Johnsingh A.J.T. (1998): Recovery of tropical rainforest avifauna in relation to vegetation succession following shifting cultivation in Mizoram, north-east India. *J Appl Ecol*, **35**, 214-231.
16. Zonunmawia A.C and Navraj Prabhan (2004). *Mizoram and Its Wildlife (Checklist of mammal, amphibian, reptile, bird, fish, invertebrate fauna & flora)* Centre for Environment Protection, pp. 1-69.
17. Zoological Survey of India (2007). *Fauna of Mizoram*, State Fauna Series 14. pp 1-691.
- ‡ Sumit Sen (2005). Mizoram trip. www.kolkatabirds.com/mizoram/mizoramtripreport.htm
- † State wise list of Birds: Mizoram <http://www.bhhservis.nic.int/Mizoram.htm>
- ‡ Choudhury A(2008). Four species of birds in Mizoram critically endangered. www.indiaenvironmentportal.org.int/content/four-species-birds-mizoram-critically-endangered
- * Lalram Thanga (2006). Peace & harmony with nature & natural resources!, www.dipr.mizoram.gov.int/index2.php?option=com_content&do_pdf=1&id=787
- † Environment and Forest Department, Government of Mizoram (2010). Mammals. www.forest.mizoram.gov.int/index.php?id=81&option=com_content&task=view